

IN THE CLAIMS:

1. (Currently Amended) Apparatus for non-destructive hyperthermia therapies, characterized in that it comprises means~~(1)~~ for generating radio-frequency electromagnetic radiations, connectable to means~~(5,6)~~ for the application of said radiations to the human body.

2. (Currently Amended) Apparatus according to claim 1, characterized in that the said means~~(5,6)~~ comprise an active electrode~~(5)~~ and a reference electrode~~(6)~~, the said active electrode~~(5)~~ being provided with means~~(52)~~ for the detection of the skin's temperature.

3. (Currently Amended) Apparatus according to claim 2, characterized in that the said means~~(52)~~ for the detection of the skin's temperature are made up of at least a sensor incorporated in the electrode~~(5)~~.

4. (Currently Amended) Apparatus according to claim 2, characterized in that the said means~~(52)~~ for the detection of the skin's temperature are made up of at least a sensor which can be connected to the apparatus and. removably associated with the active electrode~~(5)~~ in correspondence of a relevant seat~~(53)~~ thereof.

5. (Currently Amended) Apparatus according to claim 2, characterized in that the said means~~(52)~~ for the detection of the skin's temperature are connected to a control circuit~~(7,8)~~ connectable to and acting on said means~~(1)~~ for generating' radio-frequency radiations.

6. (Currently Amended) Apparatus according to claim 2, characterized in that the said electrodes ~~(5, 6)~~ consist of conductive plates or membranes.

7. (Currently Amended) Apparatus according to claim 2 ~~and/or 6~~, characterized in that the structure of the active electrode ~~(5)~~ is complementary shaped with respect to the body's region of the patient to be treated.

8. (Currently Amended) Apparatus according to claim 2, characterized in that the said reference electrode ~~(6)~~ has dimensions larger than those of the active electrode ~~(5)~~.

9. (Currently Amended) Apparatus according to claim 2, characterized in that it comprises more active electrodes ~~(501, 502, 503)~~ connected to a switch device ~~(50)~~ able to connect in sequence said active electrodes to said means ~~(1)~~ for generating radio-frequency radiations.

10. (Currently Amended) Apparatus according to ~~one or more preceding claims~~ claim 1, characterized in that it comprises means ~~(7, 8, 9, 52, 10)~~ for adjusting the temperature reached on the skin and able to vary the output power in order to keep the skin's temperature at a preset value.

11. (Currently Amended) Apparatus according to ~~one or more preceding claims~~ claim

1, characterized in that it comprises means ~~(81, 82)~~ for measuring the output power and the impedance in correspondence of the application means ~~(5, 6)~~.

12. (Currently Amended) Apparatus according to ~~one or more preceding claims~~ claim  
1, characterized in that it comprises means ~~(85)~~ to preset the duration of the treatment.

13. (Currently Amended) Apparatus according to ~~one or more preceding claims~~ claim  
1, characterized in that it comprises means ~~(80)~~ for connection with an electronic processor.